

1. EXECUTIVE SUMMARY

1.1 The NNMC Bethesda Master Plan 2008 Update

The most recent approved National Naval Medical Center (NNMC) Master Plan was completed in 1990. The stated goals of the 1990 Master Plan were geared toward stabilizing patient care operations and increasing access to patient services. As NNMC worked toward those goals, there have been many changes throughout the campus, but the basic concepts have remained the same. Now as a result of the requirements of the BRAC 2005, the latest amendment to the Defense Base Closure and Realignment Act of 1990, there will be a tremendous expansion of services at the NNMC campus and the Master Plan must be updated to provide direction in terms of logical land use planning for that growth. BRAC 2005 will realign tertiary care and additional activities from Walter Reed Army Medical Center (WRAMC) to NNMC. The new center will be known as the Walter Reed National Military Medical Center at Bethesda (WRNMMC).

This NNMC Master Plan Update was contracted through NAVFAC Washington under an Indefinite Quantity Contract for Facility Planning and Master Planning Components, Various Locations, A/E Contract #N62467-01-D-0328.

The purpose of updating the existing master plan is to address future anticipated development. In line with this is improving the primary (health care delivery and medical education) and secondary supporting missions of NNMC. This scope includes preparation of a Comprehensive 10-year Master Plan that determines the most efficient and effective utilization of the available base infrastructure and land for all of the requirements identified to include the BRAC and additional development anticipated.

The Master Plan provides a logical basis and a framework for anticipated development throughout the campus considering existing constraints and opportunities. Based on input provided by the users, it takes into account population growth and associated facilities to accommodate the expansion and realignment of services. Of course, the actual program is dependent on many variables and some of the anticipated growth may not materialize as anticipated, but the Master Plan provides a framework to ensure orderly growth when it does occur.

1.2 Current NNMC Missions and Visions

1.2.1 Growth

Significant expansion of service is expected as a result of the realignment of certain Walter Reed Army Medical Center (WRAMC) activities from Washington, DC to the National Naval Medical Center (NNMC) in Bethesda, MD per Public Law 101-510, the Defense Base Closure and Realignment Act of 1990 (BRAC Law) as amended in 2005. The specific BRAC recommendation is to:

“Realign Walter Reed Army Medical Center, Washington, DC, as follows: relocate all tertiary (sub-specialty and complex care) medical services to National Naval Medical Center, Bethesda, MD, establishing it as the Walter Reed National Military Medical Center Bethesda, MD; relocate Legal Medicine to the new Walter Reed National Military Medical Center Bethesda, MD; relocate sufficient personnel to the new Walter Reed National Military Medical Center Bethesda, MD, to establish a Program Management Office that will coordinate pathology results, contract administration, and quality assurance and control of Department of Defense (DoD) second opinion consults worldwide; relocate all non-tertiary (primary and specialty) patient care functions to a new community hospital at Fort Belvoir, VA.”

These actions recommended by BRAC 2005 must be complete on or before 15 September 2011. This not only impacts the medical functions, but has significant impact on support services and infrastructure as well. Additional facilities and infrastructure, not specifically identified in BRAC law (or statute), will be required and have been defined by the users throughout this process.

When the realignment is complete, the existing Walter Reed Army Medical Center will close and NNMC will be renamed the Walter Reed National Military Medical Center at Bethesda, MD and will serve as the new premier medical center. It will provide a full range of care to include complex specialty and subspecialty care. WRNMMC will be the military’s tertiary referral center worldwide.

1.2.2 National Naval Medical Center

From its historic beginnings in 1940, the National Naval Medical Center (NNMC) has grown to be one of the largest medical facilities in the country. As stated in the NNMC Vision:

The National Naval Medical Center is the Flagship of Force Health Protection and Operational Readiness, Outstanding Customer Service, Graduate Medical and Dental Education and Research, and World-Class Health Care within an Integrated System. Its primary mission is to provide quality health care to military members, their families and many of the Nation’s leaders.

NNMC’s mission is multifaceted as outlined below (*NNMC*):

As the Flagship of Navy Medicine:

- We provide the Nation’s best casualty care
- We maximize readiness and promote wellness for our uniformed services (staff, patients)
- We provide quality patient- and family-centered care
- We develop and export innovation in healthcare
- We lead the way in integration in the NCA healthcare system

- We provide robust education and professional development programs
- We serve as a resource for homeland defense and humanitarian assistance
- We care for the Nation's leaders
- We are the President hospital

1.2.3 Walter Reed National Military Medical Center

As NNMCMC and WRAMC realign to form the Walter Reed National Military Medical Center (WRNMMMC) at Bethesda, the shared future vision is clear. Delivered by Maj Gen Kenneth L. Farmer Jr. (WRAMC) and Rear Adm Adam M. Robinson (NNMCMC) and approved in June 2006 this vision is still strong and supported by the current commanders, the president of USUHS) and the 79th Medical Wing commanders at Andrews AFB.

"We envision and are committed to one integrated health system that leverages the assets of all DoD health care treatment facilities in the National Capital Area (NCA). The tri-service Walter Reed National Military Medical Center at Bethesda will be a worldwide military referral center and together with the Uniformed Services University of Health Sciences (USUHS) will represent the core of the integrated health system. All tri-service facilities in the NCA and USUHS will serve as a premier academic medical system focused on delivering the highest quality care, distinguished health professional education, and exemplary clinical and translational research."

1.3 Planning Methodology

The Master Plan for NNMCMC focuses on requirements projected through the next 10 years. It supports the strategic goals of NNMCMC and the realignment of services from Walter Reed Army Medical Center as well as additional anticipated growth. In order to begin the master planning process, the team reviewed existing documentation available to include previous Master Plans and updates, real property records, campus maps, archeological data, as well as multiple independent studies and facility assessments. Information on vision and mission, personnel, services, and facilities were gathered and reviewed from multiple sources.

The Master Plan is a living document and must be updated periodically to capture the inevitable changes of such a large and dynamic organization. Because of its location within the National Capital Area (NCA), the Master Plan is also reviewed by the National Capital Planning Commission (NCPC) which requires periodic reviews and updates.

The Master Plan is intended as a guide for future growth and development of the Bethesda campus. It is based on analysis of existing opportunities and constraints. The overall objective of the Master Plan is to create a campus environment that can support the significant increases required to create WRNMMMC and growth anticipated beyond the WRAMC and NNMCMC

realignment. Working within the existing campus fabric, the Master Plan strives to maintain and enhance the positive aspects of the campus.

The growth projected in the Master Plan is based on the best information available through government facility and programming channels. However, there are many factors that could change these assumptions to include policy changes, funding streams, political environment, and many others. The Master Plan provides an organized framework for the anticipated growth that is flexible enough to adapt to these inevitable changes.

A team of planners, architects and engineers conducted facility assessments and met with personnel from engineering to ensure a current understanding of conditions and infrastructure in the planning process. During the course of several visits, the team evaluated every facility on the campus from a global perspective to determine its current condition, general utilization and potential.

As the plan was developed the effort was coordinated with and working sessions were conducted with NNMC leadership, local organizations and agencies, community groups and neighborhood associations surrounding the NNMC campus. The environmental impacts of BRAC growth and change on the campus were investigated together with various options and mitigation measures; an EIS was prepared as part of that process.

1.4 Program Basis

Because of the significance of BRAC 2005, it formed the basis of the program needs. The users also identified additional support functions that were not part of the BRAC but were necessary to support BRAC decisions. A multitude of offices and personnel at both WRAMC and NNMC were tasked with evaluating the impacts of BRAC to ensure the details of the requirements were accommodated along with the necessary support not specifically identified in BRAC. These requirements were identified for inclusion in the Master Plan by a variety of sources based on their analysis.

In addition to BRAC direct requirements and BRAC support, potential growth was also anticipated in areas not directly related to BRAC but based on future projections. Specific BRAC requirements include expansion of the medical center proper and support areas of parking and enlisted housing. An increase of approximately 36% in facility space is anticipated as a result of the requirements identified, based on 4.7M SF in existing facilities. These improvements will be in place by 2011.

Projected Growth through 2016		
	Campus Personnel	Patients/Visitors
Current	8,000	497,000
2011 BRAC completion	10,200	981,000
2016 Future Growth	10,500	981,000

Current growth projections are for an increase of 2,200 staff personnel based on BRAC requirements and an additional 300 staff personnel for anticipated non-BRAC related growth. An additional 484,000 patients and visitors per year are expected as a result of this growth. The number of providers is expected to be capped by 2011, consequently flattening the number of patients and visitors from 2011 to 2016. Space to accommodate this growth was developed and provided in terms of additions and new construction for the Master Planning effort.

Table 1.4 Projected Growth through 2016

While these figures state an overall position, it was necessary to reasonably distribute the anticipated total population of staff, as well as patients, and visitors, throughout the campus for purposes of utility and transportation modeling in the master plan. While there are individual figures for existing staff, outpatient visits, student population, etc, and there are estimates for the growth anticipated, there is not a database to distribute these figures throughout the entire campus. For this effort, available figures were considered and then a reasonable square foot/person figure was used based on the overall function of the facility, code and engineering judgment for existing facilities as well as proposed growth.

The Master Plan update identifies a plan to accommodate this growth through land use planning of the proposed facilities, and evaluation of the parking, transportation and utility infrastructure.

1.5 Planning Objective

While NNMCMC, or the future WRNNMCMC, is not strictly an academic campus, the term campus is appropriate in that it is an area of multiple agencies, buildings and spaces designed to work together. A campus represents a sense of unity, identity, and common purpose, within an environment that is easily accessible, and appropriate in scale and density; all characteristics of NNMCMC and the future WRNNMCMC. Given the desired campus outcome, the Master Plan provides direction for long term growth, consistent with the overall mission, while allowing phased development through individual projects.

The overriding planning objectives in the development of the master plan were as follows:

- *Support the Medical Mission*
- *Flexibility to meet future change*
- *Aspects of security*
- *Maintain / enhance the built and natural environment*
- *Preserve historic and natural resources*
- *Develop a walkable campus*
- *Compatibility with surrounding neighbors*

These planning objectives are in conformance with the Comprehensive Plan for the National Capital Region.

The shared vision for the campus is clear; the **Medical Mission** is the core purpose of the campus' being.

In any long-term plan, **flexibility** for future change is critical. A master plan is a living document that should be updated on a routine basis as requirements, programs and priorities inevitably change.

Federal Guidelines sets minimum standards for **security** of all DoD inhabited facilities. Known as Anti-Terrorism/Force Protection (ATFP), these standards are documented in UFC 4-010-01 Oct 2003 (rev Jan 2007), DoD Minimum Antiterrorism Standards for Buildings, and must be considered in any planning effort. These standards represent a significant commitment by DoD to seek effective ways to minimize the likelihood of mass casualties from terrorist attacks against DoD personnel in the buildings in which they work and live. Security requirements will have major impacts on the overall design as structures are built or renovated.

Good stewardship requires planning efforts to maintain the existing built **environment** through the life of the facilities. Respect for the natural environment and enhancement of both the built and natural environments are part of the planning effort.

A key objective, particularly on a campus with such significant history as Bethesda, is recognition and preservation of the **historic and natural cultural resources**. The National Naval Medical Center Integrated Cultural Resource Management Plans (ICRMP), Oct 2002 was consulted for established recognition of these resources in the planning process.

A successful campus evokes a sense of community and is pedestrian friendly or "**walkable**" and has organized functional groupings with well-established wayfinding to provide easy access for users. The planning effort looked at ways to improve the safety and desire for individuals to walk on and to the campus. Density, functional groupings, wayfinding and streetscape are all tools to be addressed that encourage the objectives of a walkable campus environment. This planning objective also addresses the overall goal of incorporating features that enhance green design features and support LEED (Leadership in Energy and Environmental Design) and sustainability initiatives.

A variety of land uses are adjacent to the campus perimeter. It is paramount that the planning efforts within the campus recognize and be **compatible with** these land uses and mitigate negative impacts to **surrounding neighbors**.

1.6 Description of the Master Plan Concepts

While the Master Plan Update accommodates significant growth due to BRAC 2005, the concepts of the plan remain true to the 1990 Master Plan and previous planning efforts on the Bethesda campus.

In terms of functional relationships, the division of land use will remain essentially the same with patient care medical functions in the center as the heart of the campus, and support, community, housing, education, and research functions outside of this primary core. Permanent housing will remain in the northern portion of the campus with dormitories to the northwest and limited family housing units further east. Retail and community services will generally remain at the south end of the campus. The University will remain in the southeast quadrant. Central Plant and logistics will remain to the east of the central medical core with warehousing and minimum use functions in the most remote northeast location.

Enhanced open area and emphasis of the green spaces will continue to be a priority concept, especially in terms of the association with evidence-based design. Enhancement of strong pedestrian links will focus on pockets of green space within the built environment.

The massing and structural organization of the campus will remain focused on Building 1, the historical tower that is the central element and most recognized feature of the entire campus. Any proposed construction must maintain the importance and significance of this feature. Heights of new construction will be compatible with adjacent structures and be sensitive to



the surrounding community. The 2002 ICRMP is in the process of being revised for 2008; NNMC will observe Section 106 requirements for any project that may have adverse impacts to the existing historic fabric.

The existing roadway system to include the loop around the medical core of Buildings 1 through 10 is an organizing feature of the campus that will be maintained. Recommendations for improvements to the roadway



system are included to allow increased access to proposed growth areas. Additional parking will be distributed, rather than centralized, to maximize access to areas of identified growth. Improvements to pedestrian routes and informal paths will encourage the idea of the “walkable” campus.

Anticipated growth was evaluated against the existing utility infrastructure. Recommendations were made based on existing information available, discussions with local utilities, NNMC infrastructure managers, and computer modeling.

The campus is currently a fenced secure complex with vehicular access points from Wisconsin and Jones Bridge Road. Pedestrian access points are primarily at the south gate on Wisconsin Avenue adjacent to the Metro station. The security of the campus will be maintained and enhanced with improvements to the existing entry points.